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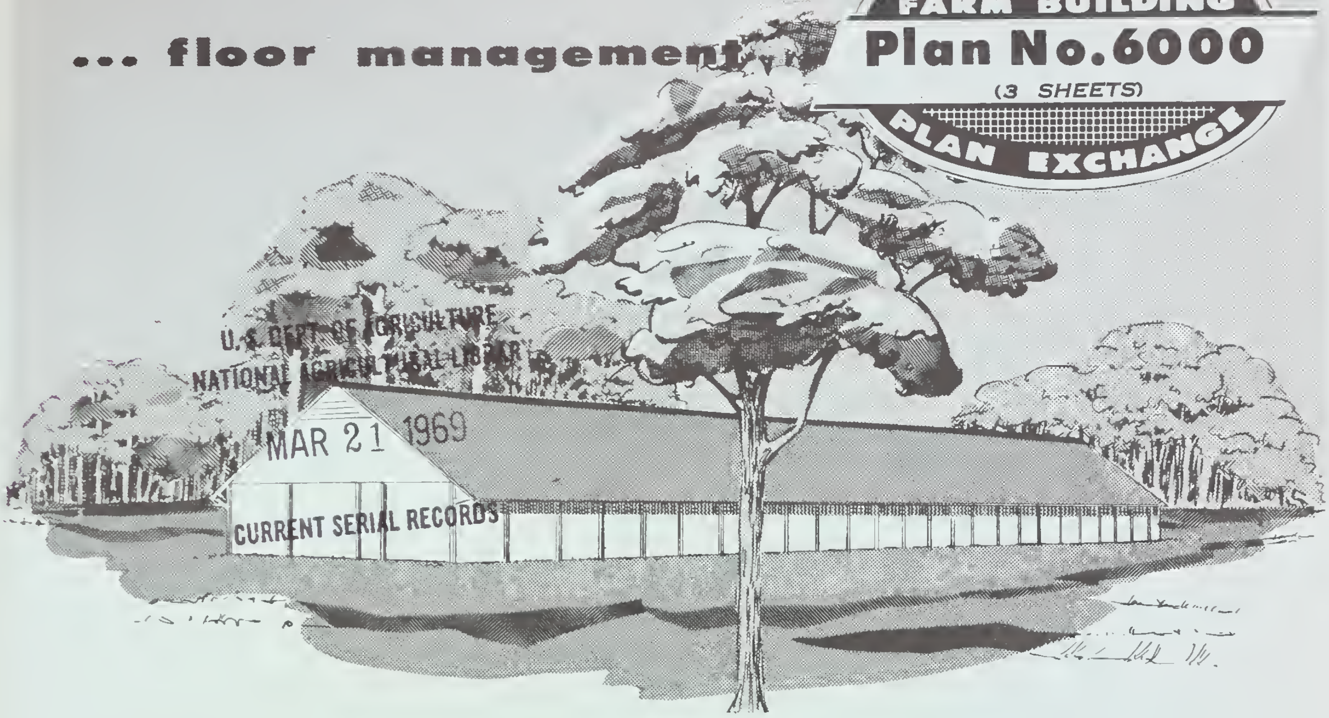
POULTRY HOUSE

... floor management

COOPERATIVE FARM BUILDING
Plan No.6000
(3 SHEETS)
PLAN EXCHANGE



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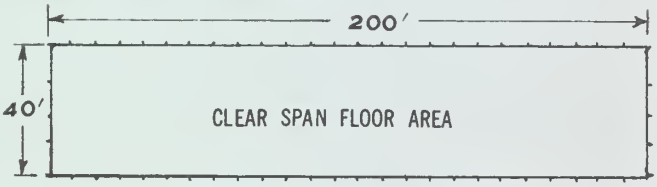

PLAN

The design of this one-story, clear span agricultural building is the result of improved construction techniques, of research for optimum environment in housing for animals, and of changes in management systems.

The new design originated in Connecticut where, for over 30 years, the poultry industry has utilized the so-called Connecticut-type poultry house—a two-story unit, usually constructed with a shed roof and a minimum of insulation and other environment controlling features.

In southern New England the poultry industry is primarily concerned with the production of market eggs; more specifically, the production of brown-shelled eggs, which command a premium price in the Boston market area. Several breeds of chickens, collectively called heavy birds, produce brown eggs, and research has indicated that these birds do not lay at maximum efficiency in the cage-type laying house. Consequently, to utilize the new techniques mentioned, this poultry house was designed for the floor-management system.

This insulated, windowless, 40-foot-wide house allows a capacity of about 32 heavy birds per foot of length. Although the plan shows a building length of 200 feet, this may be varied in units of 8 feet to suit the size of flock desired.

Ventilation is provided by exhaust fans mounted in one sidewall and by narrow air-intake slots in the ceiling along both sidewalls. The fans are installed in groups, spaced not more than 150 feet apart and not more than 75 feet from the ends of the building. Ventilation rates currently recommended in Connecticut are as follows: 0.5 c.f.m. per bird, continuous; plus 2.5 c.f.m. per bird, with thermostats set at 55°; plus 3.0 c.f.m. per bird, with thermostats set at 60°; total required fan capacity of 6.0 cubic feet of air per minute per bird housed. Consult your County agricultural agent or State extension agricultural engineer for advice on the ventilation requirements in your area.

Washington, D.C.

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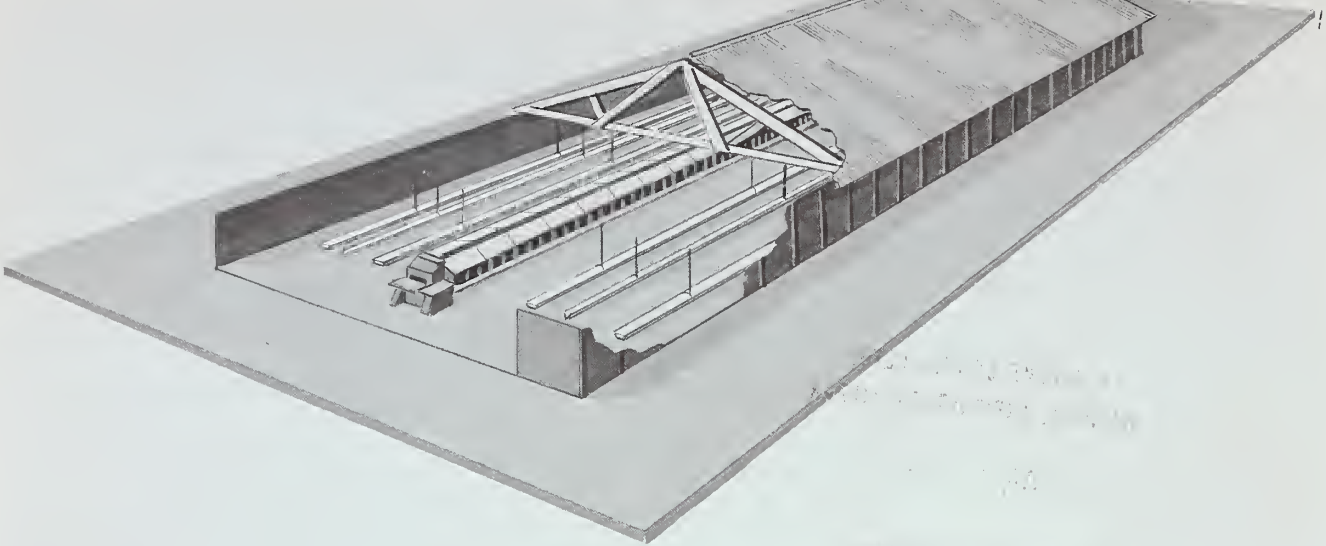
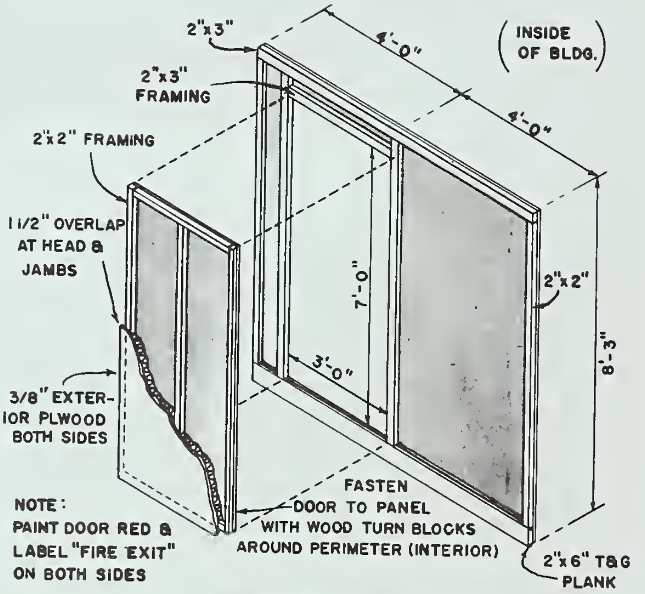


Clear span construction provides maximum versatility of enclosure for different types of agricultural management systems and permits the unrestricted use of equipment within the building. Also, a cost analysis showed that the 40-foot-wide, clear span construction with wood trusses spaced 4 feet on centers cost less than the conventional roof framing construction.

The minimum ceiling height of 8 feet permits operation of large power equipment for cleaning the floor and provides overhead clearance for certain types of equipment. The 8-foot height also allows use of standard-size plywood sheets as both interior and exterior wall covering.

Traditionally, two-story construction is lower in cost per square foot than one-story construction because the builder can spread the relatively expensive foundation and roofing costs over twice as much floor area. To minimize foundation and roof costs in a one-story unit, a post-supported structure with a clear span, metal covered roof was developed. Pressure-treated 6 by 6 posts, 12 feet long, are located at 8-foot intervals along the sides of the house and support fabricated wooden beams which, in turn, provide support for the roof trusses. When compared with a conventional foundation, each of these posts replaces approximately 1 cubic yard of concrete with a resultant saving of about 10 percent in total building costs. Total costs for the roof system in the one-story house, installed as shown, is approximately the same as the total costs for the second-floor supports and flooring installed in the two-story house. Thus, construction cost per square foot of floor area is about the same for each house, but the advantages of improved materials handling features are realized in the one-story house.

The use of commerically fabricated roof trusses, available in many areas, is suggested. In addition to the bracing shown on the working drawings, diagonal braces from the ridge to the eaves, fastened under the upper chords of the trusses, should be installed, especially at the ends of the building, to resist overturning.


2"x3"
4'-0"
(INSIDE OF BLDG.)
2"x3" FRAMING
4'-0"
2"x2" FRAMING
1 1/2" OVERLAP AT HEAD & JAMBS
7'-0"
2"x2"
8'-3"
3'-0"
3/8" EXTERIOR PLWOOD BOTH SIDES
NOTE: PAINT DOOR RED & LABEL "FIRE EXIT" ON BOTH SIDES
FASTEN DOOR TO PANEL WITH WOOD TURN BLOCKS AROUND PERIMETER (INTERIOR)
2"x6" T&G PLANK

FIRE ESCAPE PANEL

Working drawings may be obtained from the extension agricultural engineer at your State university. There may be a small charge to cover cost of printing.

If you do not know whom to contact in your State, send your request to Agricultural Engineer, Federal Extension Service, U.S. Department of Agriculture, Washington, D.C. 20250. He will forward your request to the correct university.

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